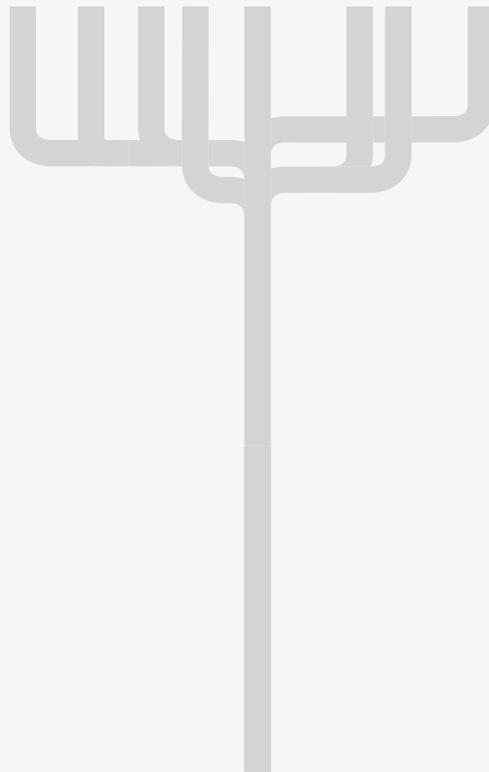
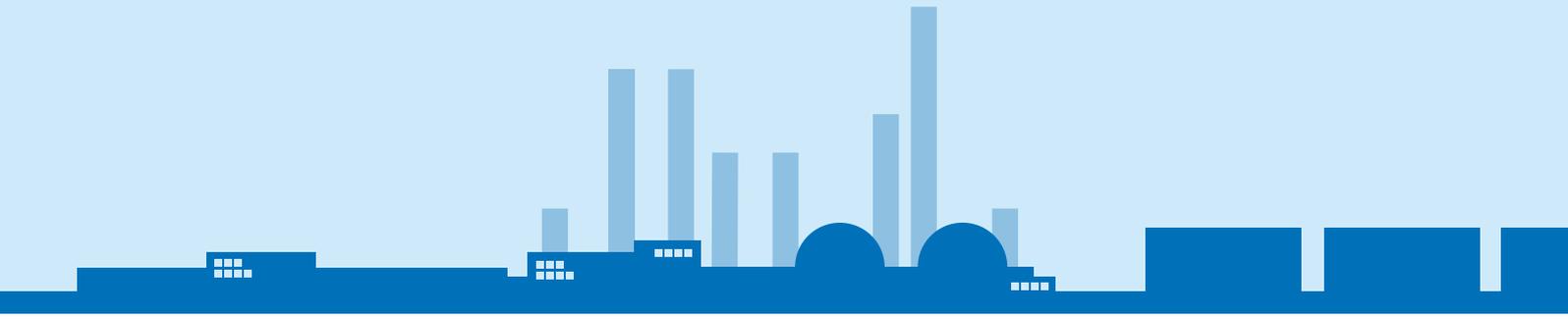


TEESSIDE^{CO₂} COLLECTIVE

A NEW INDUSTRIAL FUTURE FOR THE UK



*Creating Europe's first
Carbon Capture and Storage
equipped industrial zone*

teessidecollective.co.uk

Teesside Collective is a cluster of leading industries with a shared vision: to establish Teesside, in Tees Valley, as the go-to location for future clean industrial development by creating Europe's first Carbon Capture and Storage (CCS) equipped industrial zone.

CCS is a proven technology that can capture, transport and permanently store up to 90% of the CO₂ emissions produced by industrial facilities, preventing them from entering the atmosphere. CCS is already operating successfully at industrial sites in the US and it has the potential to stimulate new growth in energy intensive industries such as chemicals and steel in Teesside.

Teesside Collective is a pioneering infrastructure project offering a compelling opportunity to progress the UK's industrial and environmental interests hand-in-hand.

"CCS on industrial plant is going to be a critical part of the global effort to prevent serious climate change. Teesside is in the right place, at the right time, to get ahead of the curve."

Sir David King,
UK's Special
Representative for
Climate Change

Dianne Sharp,
North East
Director, CBI

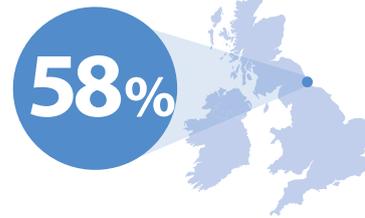
"A CCS network in Teesside is a critical step, giving a shot in the arm to British industry's long-term future."

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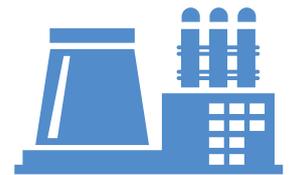
Teesside: A unique industrial cluster ...

Teesside is responsible for



of the UK's chemicals industry

It has **Europe's 2nd largest blast furnace**



Teesside produces polyester resin for



Northeast England process industries contributes



Teesside Collective is key to retaining a strong UK industrial base

Teesside Collective would stimulate substantial economic benefit in Teesside, in Tees Valley and the UK as a whole.

The project would...

- ✓ future-proof local industries from the rising costs of emitting CO₂, maintaining a competitive edge over international rivals.
- ✓ bring about substantial growth in Teesside's process industry workforce from the current 12,000.
- ✓ turn Teesside into a magnet for inward investment from international firms seeking to reduce their exposure to future CO₂ prices.
- ✓ ensure Teesside's process industries continue to make their essential contribution to the UK economy.
- ✓ be a template for similar networks elsewhere, based around new, exportable expertise in industrial CCS.
- ✓ be a national industrial asset, putting the UK at the forefront of the global drive to decouple growth from emissions.

...with major potential to cut carbon

Teesside industries are responsible for **5.6%** of industrial emissions in the UK

Regional emissions per person are almost **3x** the UK average

Teesside is home to **5** of the UK's top 25 CO₂ emitting plants

Costs of CO₂ permits are expected to **quadruple by 2030**

Decarbonising Teesside is crucial to decarbonising the UK

There is strong agreement among scientists and policy makers that applying CCS to industry will be vital in the global fight against climate change.

The project would...

- ✓ cut CO₂ emissions in the North East by up to 5 million tonnes a year by the early 2020s, with more reductions over time.
- ✓ play a crucial and timely part in keeping the UK on track to meet its 2050 80% CO₂ reduction target.
- ✓ be a cost-effective method of reducing CO₂ emissions.
- ✓ help prevent industries (and jobs) moving to countries where they may end up emitting more CO₂ than they would have in the UK.
- ✓ enable cleaner UK-based process industries to meet customers' growing sustainability demands and provide the products needed for other parts of the UK's low carbon economy.
- ✓ be held up as a global exemplar when viewed from the UNFCCC climate talks in Paris in December 2015.

Mike Huggon,
Managing Director, BOC, supplies industrial gases in Teesside

"Industrial CCS infrastructure would help retain energy intensive industries and increase their ability to compete on a European and global stage."

"This is the logical place to start for an industrial CCS network. Bulk carbon saving is within our grasp."

Keith Brudenell,
Site Operations Manager, Growhow, produces ammonia in Teesside

Mark Kenrick,
CEO of Lotte Chemical UK, produces Polyester Resin in Teesside

"Our vision is for a CCS network that grows over time, attracting new industries who want to plug into a world renowned infrastructure."

"There is a clear need to maintain and further develop our industrial base and initiatives such as Teesside Collective can play a very important role in that respect."

Cornelius Louwrens,
UK Business Director and Chief Operating Officer, SSI UK, produces steel in Teesside

Paul Sullivan,
CCS Business Lead, National Grid

"Teesside has the opportunity to be at the inception of a future carbon transmission system for the UK, putting it on the global map of successful, forward thinking industrial regions."

"The ripple effect of a successful CCS network in Teesside would be a game changer for the region and the UK economy."

Stephen Catchpole,
Managing Director of Tees Valley Unlimited

Dr Stan Higgins,
CEO North East Process Industry Cluster

"Industrial CCS is a win win. In our efforts to create a carbon condensed world we will also sustain the UK's process industry; creating jobs, wealth and a location businesses will want to invest in."

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The next steps for Teesside Collective

Tees Valley Unlimited, the Local Enterprise Partnership which includes the Teesside industrial cluster, has been awarded £1m funding by the UK Department of Energy and Climate Change to develop a business case for deploying industrial CCS in the Teesside cluster and to make recommendations for a funding mechanism. This will be complete by summer 2015.

The right place...

The UK is optimally located in Europe for CCS and Teesside, in Tees Valley, is uniquely suited to an industrial CCS network:

- ✓ Teesside is the most concentrated industrial cluster in the UK, making a CCS network technically feasible and more cost effective.
- ✓ CO₂ is already captured by some plants in Teesside and exported for commercial use. The area has extensive pipe networks for which a CO₂ pipeline would be a deliverable extension.
- ✓ Teesside benefits from proximity to potential CO₂ storage sites under the North Sea, such as those envisaged for the UK's main CCS power projects, White Rose and Peterhead.

...at the right time

Initiating a project now would capitalise on a unique window of opportunity:

- ✓ it would give Teesside a competitive edge before rival industrial locations in Europe start to develop CCS.
- ✓ it is the best chance of realising the Climate Change Committee's recommendation of widespread deployment of industrial CCS in the UK from the second half of the 2020s.
- ✓ following in the slipstream of the first CCS on UK power plant, Teesside Collective could make cost effective shared use of the same infrastructure.



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